



The ILLINOIS ENGINEER

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AUGUST, 1954

THE ILLINOIS ENGINEER—THIS MONTH

National President Clarence T. Shoch

The ILLINOIS ENGINEER seldom reprints material which has appeared in the American Engineer. The latter magazine is received by all members of ISPE who are members of the National Society and consequently articles published in it are available to the majority of ISPE members.

However, we are making an exception this month. National President C. T. Shoch's article, "Surveying the Road Ahead," which was published in the American Engineer for July seemed important enough to warrant such an exception. In this article he restates the aims, policies, purposes, and professed principles of the NSPE. Every member of ISPE, National and otherwise should be familiar with them.

Read President Shoch's article in the adjoining column.

W. A. OLIVER, Editor

ENGINEERS' CREED

*Adopted by NSPE's
Board of Directors, June, 1954*

As a professional engineer, I dedicate my professional knowledge and skill

To the advancement and betterment of human welfare.

I pledge:

To give the utmost of performance,

To participate in none but honest enterprise,

To live and work according to the laws of man and the highest standards of professional conduct,

To place service before profit, the honor and standing of the profession before personal advantage, and the public welfare above all other considerations.

In humility and with need for Divine Guidance, I make this pledge.

No man is small who does a small job in a great way.

SURVEYING THE ROAD AHEAD

C. T. SHOCH, President

National Society of Professional Engineers

Service is its own reward. At least I have found it so in professional engineering work. To be afforded the far broader service opportunity that is a part of the presidency of the National Society of Professional Engineers is, at one time, added honor and a further challenge. For both I am grateful. I shall do my best to advance the interests of the engineer as a professional man, and to promote the Society as the accepted medium for bringing this about.

Opportunities abound for all of us in professional service—opportunities which safeguard the public while bringing it tomorrow's comforts and conveniences; opportunities which make engineering work better known and valued while causing it to be even more deserving of appreciation; opportunities which raise the social acceptance of engineers and earn for them advancement in an economic sense.

The year ahead is not without its full quota of needs to be served. Some have profession-wide implications. All affect us as individuals, although perhaps in varying degrees. One of particular concern is in the category of "putting out a fire." This is the need for calmly and intelligently, albeit quickly, developing among engineers and their employers the understanding that the work of the engineer in the form of applied ideas is as much a management-type contribution to production as is the financing that provides the production plant. It behooves engineers to so regard their employment. Managements likewise should take this factor into consideration in working out the conditions of engineering employment.

A realization of proper employer-employee relationship and general application of the principle just stated should go far toward relieving the feeling among engineers that they must have professional union protection. Aside from the aspect of fair treatment, a satisfactory employer-employee relationship will help avoid another factional issue and superficial stratification within the profession.

SUBSCRIPTION RATES

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If someone were to pay you ten cents for every kind word you ever spoke about people, and collect five cents for every unkind word, would you be rich or poor?

The problems facing young engineers comprise another specific field calling for mature consideration. Here the man entering the profession is temporarily confused not only by the union situation, but also by uncertainties in the technical specialty he should pursue, the conflicting viewpoints as to the desirability of registration and the lack of uniformity among the registration laws of the various states.

High among the ever present needs are a substantial increase in the standards of conduct between engineers and mutual respect among groups of engineers. A broader viewpoint is needed by each of us of the problems of engineers in other branches of the profession and fields of employment. Help is needed, too, in effecting the unification of professional effort. The National Society will give further impetus to bringing about a concert of thought and action in professional matters.

Membership activity this year will stress the development of program material to aid chapters and state societies in attracting presently qualified non-members, and in conducting meetings of even greater individual and group interest to hold membership gains.

Important too will be the observance of Engineers' Week, with increased emphasis on broadening the present local interest to one of true national observance. In legislative matters, the careful screening of national and area-wide developments affecting any phase of the engineering profession will continue. In addition, National Society work this year will provide appropriately for a review of ethical matters, renewal of data on salaries and fees, and encouragement of uniformity of registration laws.

Each of the specific objectives is spearheaded by a committee. Its work is aided and made effective through the efforts of other committees working on chapter activities, public relations, legislation and related items. All committees are capably manned and, to the degree possible, adequately financed. Men of comprehensive understanding and mature judgment comprise the board. My associate officers in the administration are eminently fitted to knit together and put into action all phases of the program. The headquarters staff, while too limited in numbers for maximum desired output, nevertheless is well qualified and energetic in producing the materials that are of service to our membership.

Worthwhile accomplishments in a professional sense are possible only by individual effort at all three levels of our organization—chapter, state and national. Humble beginnings are all that any of us can make. Work diligently in your chapter's activities, and encourage others to take a part. Your state society needs your help and counsel. The National Society, too, welcomes your participation. Cooperate locally with engineering groups and the technical societies. All these carry the assurance that a man's personal value, and the public regard for his profession, will be materially enhanced. The smallest beginning in the acceptance of professional opportunities is a worthy start on the larger job of defending

and promoting the way of life that has been made possible by our own contributions.

Resolve with me, if you will, that during the year ahead we will do our utmost to encourage and participate in needed profession-wide activity along the several fronts mentioned. As individual members, let us dedicate our efforts in keeping with the premise that a mark of professionalism is the way a man applies himself to the business of working and living. In so doing, we shall adapt ethical standards to circumstances, balance learning with human experiences and be open-minded while of firm conviction. We shall accept responsibility for the actions of others, all the while tending our own.

We are by training and experience the builders of a better way of life. Let us carry the same concept enthusiastically into matters of professional interest, that the engineers' professional estate too may prosper.

ANNUAL MEETING OF N.S.P.E.

The National Society held its annual meeting in Milwaukee on June 9-12, last. In a future issue of the ILLINOIS ENGINEER, we expect to publish a report of that meeting by our National Directors. In this issue we are printing pictures sent to us by National Director Lee I. Osborn.

CLAY PRODUCTS ASS'N PUBLISHES BOOKLET

The Clay Products Association has published a revised edition of Tentative Standards for Vitrified Clay Sewer Pipe. This booklet contains up-to-date tentative standards for vitrified clay sewer pipe, sewer pipe fittings, wall coping and flue lining.

Included in the illustrated booklet are the standard dimensions for all sizes of vitrified clay sewer pipe ranging in size from 4 inches to 36 inches, as well as the dimensions for all types of sewer pipe fittings. Comparative dimensions of standard strength and extra strength pipe are also given.

The booklet should be of particular interest to contractors, plumbers, builders, engineers and architects.

Free copies of Tentative Standards for Vitrified Clay Sewer Pipe may be obtained by writing to Clay Products Association, 100 North LaSalle Street, Chicago 2, Illinois.

COST OF LIVING INDEX

The cost of living correction factor to be applied to the I.S.P.E. Schedule of Minimum Fees and Salaries is based upon the Consumer Price Index of the 1947-49 average as determined by the Bureau of Labor Statistics. On the 1947-49 base the correction factor for June, 1954, is 115.1.

For those who are still using the old schedule the correction factor is 192.2 based upon the 1935-39 average.

"Almost 10 million U. S. families get their mail (by automobile) through R.F.D. and Star routes."—*Rural Marketing*.

PICTURES FROM NSPE's 20TH ANNUAL MEETING

Milwaukee, June 9-12, 1954



Above. AT WORK—Intent faces indicate that important business is being considered at the meeting of the National Board.

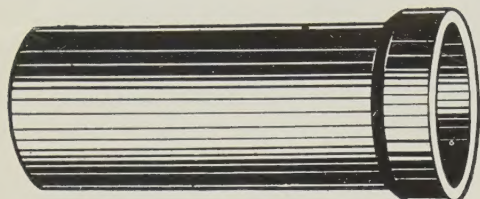
Below. AT PLAY—All work and no play. . . . Prominent Members of I.S.P.E. Left to right, L. K. Crawford, Capital Chapter; Frank Edwards, Chicago Chapter; M. R. Golly, President, Capital Chapter; C. W. Klassen, State President, and Ladies. The couple at the left are unknown.



20th Annual Meeting of
The National Society of Professional Engineers
Schröeder Hotel June 9-12 '54 Milw. *Carlson*
dynasty

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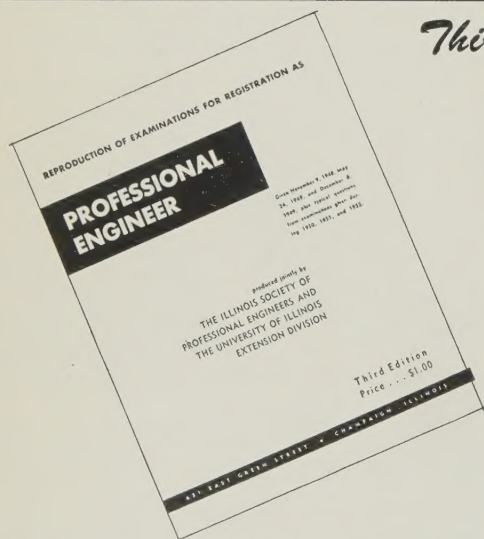
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AUTO BRIEFS

Automobiles today contain more light bulbs than an average five-room home. Current models have an average of 20 lights, and some have as many as 38. There were only five or six lights in the average 1925 car, about 13 in the 1940 models, and 16 in 1946 cars.

The automobile industry uses almost \$80 million worth of cotton in its products in one year.

Nearly 30 million people—45 per cent of all employed persons in the U. S.—use passenger cars daily in their work, or in traveling to and from their jobs.

Since 1900, more than 136 million motor vehicles have been produced in the U. S.

About 11 per cent of car owners in the U. S. have more than one car.

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Use of this space is limited to members and associates of the Society. This is a dignified and excellent way to let engineers know that your firm can always accept another account. The price is very reasonable. A card or letter to the Secretary, 631 East Green Street, Champaign, Illinois, will bring full details.

I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves by way of amends to be a help and ornament thereunto.

Sir Francis Bacon

"The proportion of farm families owning an automobile appears to be a little higher than the proportion of all families having an automobile. Rural families have less access to mass transportation than urban families and are often more dependent on the family car for transportation."—L. Jay Atkinson, U. S. Department of Commerce.

Engineering Societies Personnel Service, Inc.

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These items are from information furnished by the Engineering Societies Personnel Service, Inc., Chicago. This SERVICE is operated on a co-operative non-profit basis by the Illinois Society of Professional Engineers, and the national societies of Civil, Electrical, Mechanical and Mining and Metallurgical Engineers. Apply to ESPS, Chicago and the key number indicated. Prepared ENGINEERS AVAILABLE advertisements limited to 40 words, with typed resumé attached may be submitted to ESPS, Chicago by members of the Illinois Society of Professional Engineers at no charge.

If placed in a position as a result of an Engineers Available or Position Available advertisement, applicants agree to pay the established placement fee. These rates are available on request and are sufficient to maintain an effective non-profit personnel service. A weekly bulletin of positions open is available to subscribers. Apply E.S.P.S., Chicago.

OVER THE MANAGER'S DESK

August brings hot, sultry dog days when everyone has a tendency to slow up. However, do not allow yourself to slow up if you are an employer of engineers. We still have a definite shortage of good engineering talent. Phone or send your job specifications to us as it still will take time to find suitable applicants for you and you will want to be all set for September.

If you are an engineer who is not happy in your present position, come in and register now as opportunities still exist for you to improve yourself, if you think you have talent which is not being used to the fullest.

B. H. A.

MEN AVAILABLE

Sales Engr., C.E., 25. Nineteen mos. surveying, estimating construction costs, programming, maintenance work. Six mos. detailing reinforced steel for concrete structures. Twenty-two mos. instructor of airfield construction. \$5200. Midwest. 928-PE

Metallurgist, M.E., 30. Three yrs. supervise maintenance of mech. eqpt. Four yrs. lab. assistant in fuel, lubricants, metallography, and testing highway materials. \$6700. Chicago. 929-PE

Designer, 33. Four and one-half yrs. construct, install, operate and maintain instruments in connection with basic research. Analyze and repair from final test line. \$4500. Chicago. 930-PE

Testing, M.E., 28. Sixteen mos. testing, developing and writing reports on ventilating units and weather instruments, etc. Thirty-two mos. supervise estimating, train new personnel, and some planning of work orders. \$4800. Chicago. 931-PE

Devel. Engr., E.E., 27. Fifteen mos. testing of electrical rotating auxiliary eqpt., development and technical writing in connection with electrical controls. Three yrs. instruction of railroad supervision. \$6000. Midwest. 932-PE

Development, 37. Eight yrs. experimental elec. test of traction motors and generators. Charge of engrg. testing of relay and contactors. \$5700. Chicago. 933-PE

Ind. Engr. and Tel. Eng., 35. Eight mos. production scheduling, production control, procedures for company advancement, inventory control, and preventive maintenance.

Eight mos. developed process charts for radar equipment. \$4500. Chicago. 934-PE

Ind. Mgmt. Engr., M.E., 26. Five yrs. resp. for development of special manufacturing machinery and processes. Experienced with automatic machinery, manufacturing process control, methods and plant layout. \$6300. Chicago. 935-PE

Plant Engr., M.E., 25. Three mos. plant engrg., layout, drafting. Two yrs. training program for foundry engineers. \$4500. Chicago. 936-PE

Designer, M.E., 31. One yr. investigation and analysis of balancing problems. Design various parts for mining machines, special machines and changes on existing line. \$6600. Chicago. 937-PE

Factory Mgr., M.E., 34. Seven yrs. resp. for operation and maintenance of large number of employees. Supervise all activities. One yr. instructor of production management. Three yrs. Sr. Production Engineer. \$12,000. Midwest. 938-PE

POSITIONS AVAILABLE

Process Eng. & Tool Design. Up to 42 yrs. old. 6 plus yrs. exp. in processing gears or general machine shop products. Know: gear mfg. of custom built small gears. For a mfr. of gears. Sal.: \$6000-7000. Location: Chicago. Employer will negotiate fee. C-2016

Canadian Sales Engr., M.E., Canadian Univ. Must be Canadian citizen with experience. Age: 30-40. Sell to steam power plants or operate power plants with sales aptitude. Duties: assist in forming a new Canadian company and sell well known American line of power plant instruments and controls for steam plants. Will sell, service and eventually supervise assembly. Mfr. of instruments. Straight commission and stock participation. Must handle this line only. C-2017

Design & Production Capacitors. 2 plus yrs. exp. in design and mfg. of oil or wax paper capacitors. Know: Previous capacitor mfg. exp. Duties: design, starting new dept., and engineering of production and costs. For a mfr. Sal.: \$6500-8500. Loc.: Chicago. Employer will pay fee. C-2041

Design & Development, Grad. Meeh. Recognized school. 0-5 yrs. plus exp. Duties: to analyze customers' needs, review existing techniques, establish design approach for

new products and develop sound designs for manufacturer of communication equipment. Must be U. S. Citizen. Sal.: Open—dep. on exp. Location: Chicago. C-2044(a)

Design & Development, Grad. Elec. Recognized school. 0-5 yrs. plus exp. Know: of communications and electronics. Duties: develop switching storage and similar circuitry embodying transistors and electron tubes for manufacturer of communication equipment. Must be U. S. Citizen. Salary: Open depending on exper. Loc.: Chicago. C-2044(b)

Chemical Process. Educ.: Chem. Duties: in plant engr. and tube processing will handle parts processing, cost reduction, quality control, methods, glass to metal sealing problems, and testing. For a Mfg. of electronics. Sal.: up to \$9500. Loc.: Several. Empl. will pay fee. C-2051(d)

Project Engr., M.E. Age: 28-35. 5 plus yrs. exp. in des. and devel. of electro meech. devices such as program sequence timers, escape mechanisms, cam des. relays and switches. Duties: design and development of a complete line of products relating to the above. Sal.: \$6000-8000. Loc.: Chicago. Empl. will pay fee. C-2052

Director of Res., Grad. Eng. Age: 35 plus. 10 plus yrs. exp. in carrying on res. projects. Know: Ceramics. Duties: Director of research supervising projects being carried on at various educational institutions throughout country on clay products used primarily in bldg. field. Good personality, able to direct others. For trade assoc. Sal.: \$10-\$15,000. Travel. Headquarters: Chicago. C-2055

Designer, E.E. Age: 35. 5 plus yrs. exp. in fractional H.P. motor design. Duties: design and development of universal fractional h.p. motors. For mfr. of elect. products. Sal.: \$8000-\$10,000. Loc.: Chicago. Employer will pay fee. C-2057(a)

Research, Grad. E.E. Age: 30-50. 5 plus yrs. exp. in systems and design work including a thorough knowledge of electronic design and specific knowledge of computer and/or fire control problems. Sal.: \$8-9000. Location: Chicago. C-2059(a)

Sr. Design Engr. E.E. Age: 30-50. 3 plus yrs. of design experience including work in digital circuitry, storage problems, shift and storage registers and transistorized circuit. Salary: \$7-7500. Location: Chicago. C-2059(b)